The Water Utility Enterprise

Final - June 1979

Santa Clara Valley Water District

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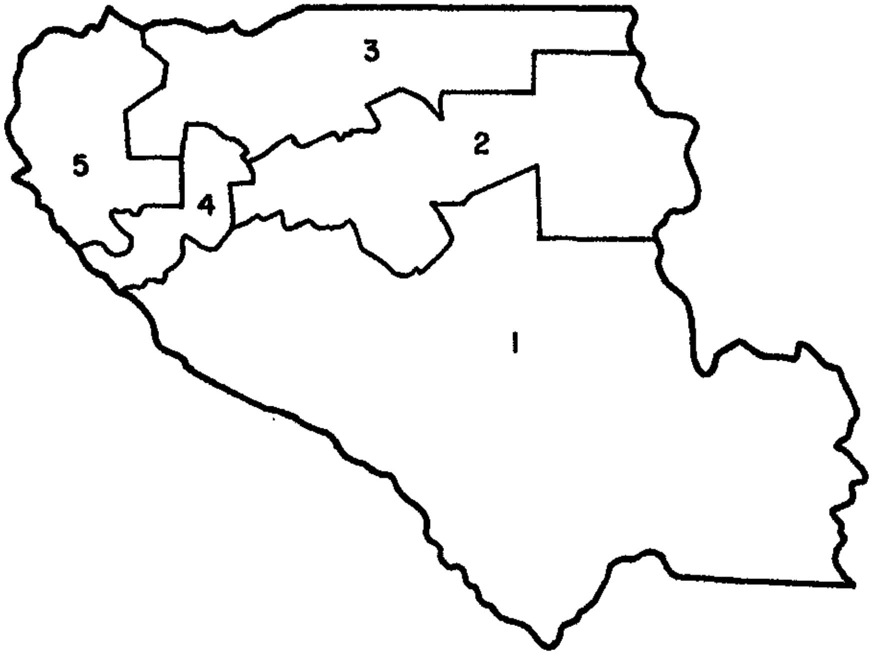

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Santa Clara Valley Water District

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Water Utility operations in fiscal year 1977-78 were impacted by several factors. Water supply conditions improved as a result of above average rainfall, replacing some of the groundwater that had been overdrafted in the prior two severe drought years. In June, 1978, the Bureau of Reclamation was authorized to proceed with construction of the revised San Felipe Division facilities. The voters of California passed Proposition 13, which resulted in a significant reduction in the projections of property tax revenues that would be available to support the Water Utility. Also in June, 1978, the District sold $2 million in revenue bonds to finance the initial phase of the expansion of the In-County Water Distribution System.

In January, 1979, the Bureau of Reclamation awarded a contract for the construction of the Pacheco Tunnel, a major feature of the San Felipe Division, thus bringing the delivery of supplemental water one step closer to reality. During fiscal 1978-79, the District began the design of the Almaden Valley II and Cross Valley Pipelines. The construction of a portion of the Cross Valley Pipeline is scheduled to begin in the spring of 1979.

Some of the revenues which were lost to the Water Utility Enterprise as a result of the passage of Proposition 13 have been replaced with revenues from taxes levied to meet the District's debt service on outstanding general obligation bonds. The California Attorney General has issued an opinion that charges for the South Bay Aqueduct are in the same category as debt service obligations and can be repaid from revenues from a special ad valorem tax levy.

During 1979-80, construction of the first phase of the Cross Valley Pipeline should be completed, and construction should be well under way on the Almaden Valley II Pipeline. Design work on additional features of the In-County Water Distribution System will also be under way.

Following meetings with the Water Commission, Water Contractors, Farm Advisory Committee and public hearings, the District's Board of Directors on April 17, 1979 adopted the water rate structure recommended in the 1979 Preliminary Water Utility Enterprise Report. This rate structure includes a $5 per acre-foot increase in the basic user charge for M&I water, a $1.25 per acre-foot increase in the basic user charge for agricultural water and the levy of a countywide ad valorem tax to pay part of the charges for the South Bay Aqueduct. The levy of this tax will generate $790,000 in 1979-80 and will increase the ad valorem tax rate by less than $0.02 per $100 of assessed valuation.

The water rates adopted by the Board of Directors for 1979-80 are $44 per acre-foot for municipal and industrial water and $11 per acre-foot for agricultural water in Zones W-2, W-3.1, W-3.2, W-3.3, and W-3.5. The Treated Water surcharge will remain at $41 per acre-foot. No charges are made in Zones W-5 and W-6 for next year.

John T. O'Halloran
General Manager

AN AFFIRMATIVE ACTION EMPLOYER

This is the eighth annual report on the status of the Santa Clara Valley Water District's Water Utility Enterprise. The purpose of this report is to provide information on the following items:

- Current and future water requirements of Santa Clara County
- Current and future water supply available to meet those requirements
- Future capital improvements needs
- Future financial needs of the Water Utility Enterprise including expenditures and a means of financing them
- Water charges to be levied in any zone or zones of the District for the next fiscal year

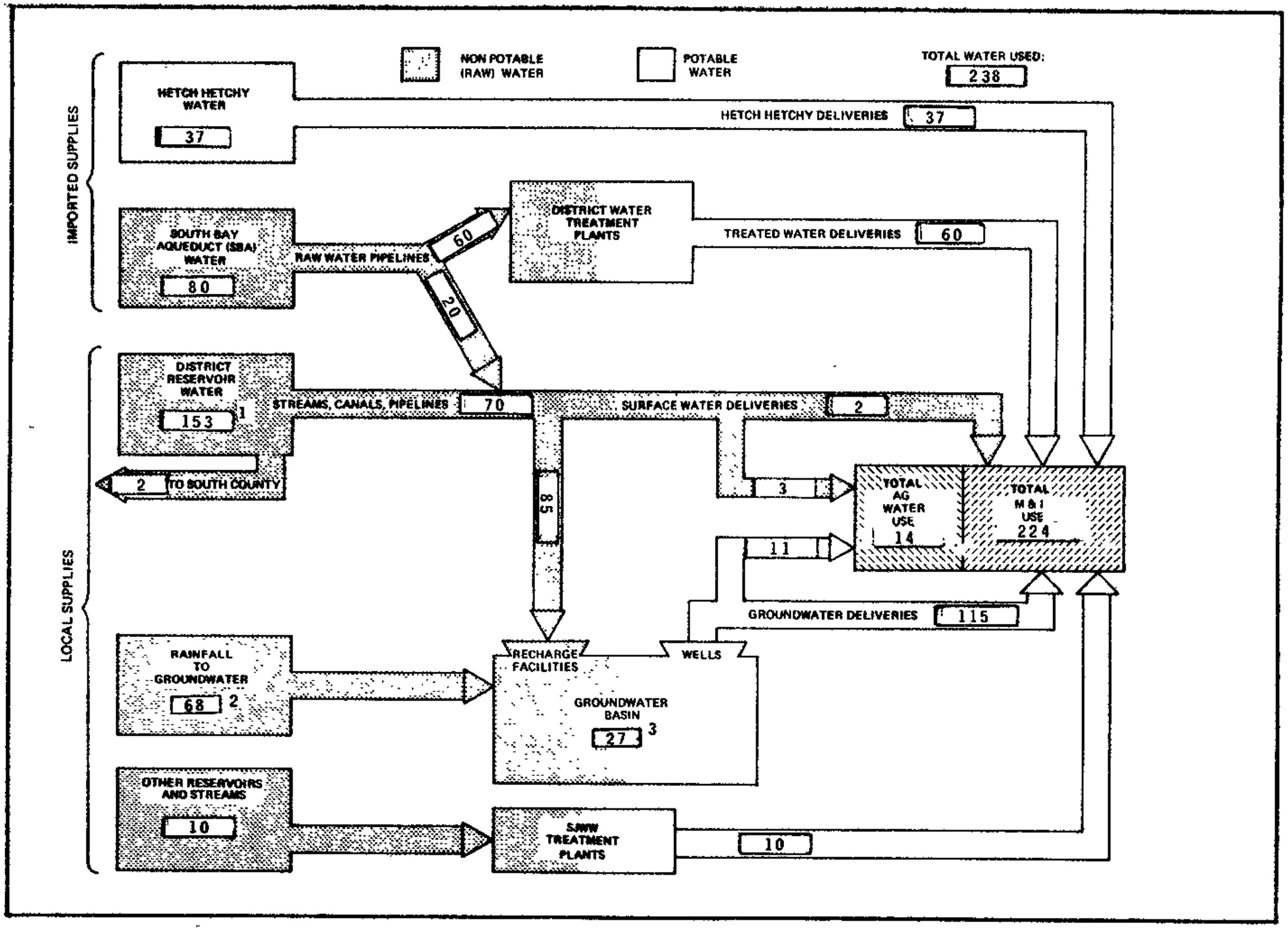
1977-78 Water Picture...

After a very dry fall, rainfall in Santa Clara County in the second half of 1977-78 was considerably above average; reservoir supply was replenished throughout the County, with all of the District's reservoirs except Anderson filling to capacity.

During this period, because of the 25% voluntary rationing program which was in effect in 1977 and because 1978 was a wet year, water use decreased in comparison to the previous year. Municipal and industrial water use for North Santa Clara County was about 9 percent lower and agricultural water use was about 30 percent lower than in 1976-77.

The 1977-78 water supply and water use for North Santa Clara County is summarized in the diagram at the right. This diagram shows the quantities of the various sources of supply available and the distribution of use in North Santa Clara County. The total water use in North Santa Clara County during 1977-78 was 238,000 acre-feet, while the annual supply amounted to 324,000 acre-feet.

WATER SUPPLY AND USE
NORTH SANTA CLARA COUNTY
1977-78
(All values in 1,000 acre-feet)



1. Includes 22,000 acre-feet of carryover storage from previous years and 59,000 acre-feet of additional storage developed in 1977-78.
2. Includes unmeasurable subsurface inflow.
3. 27,000 acre-feet were added to storage in the Santa Clara Valley groundwater basin.

Water Use...

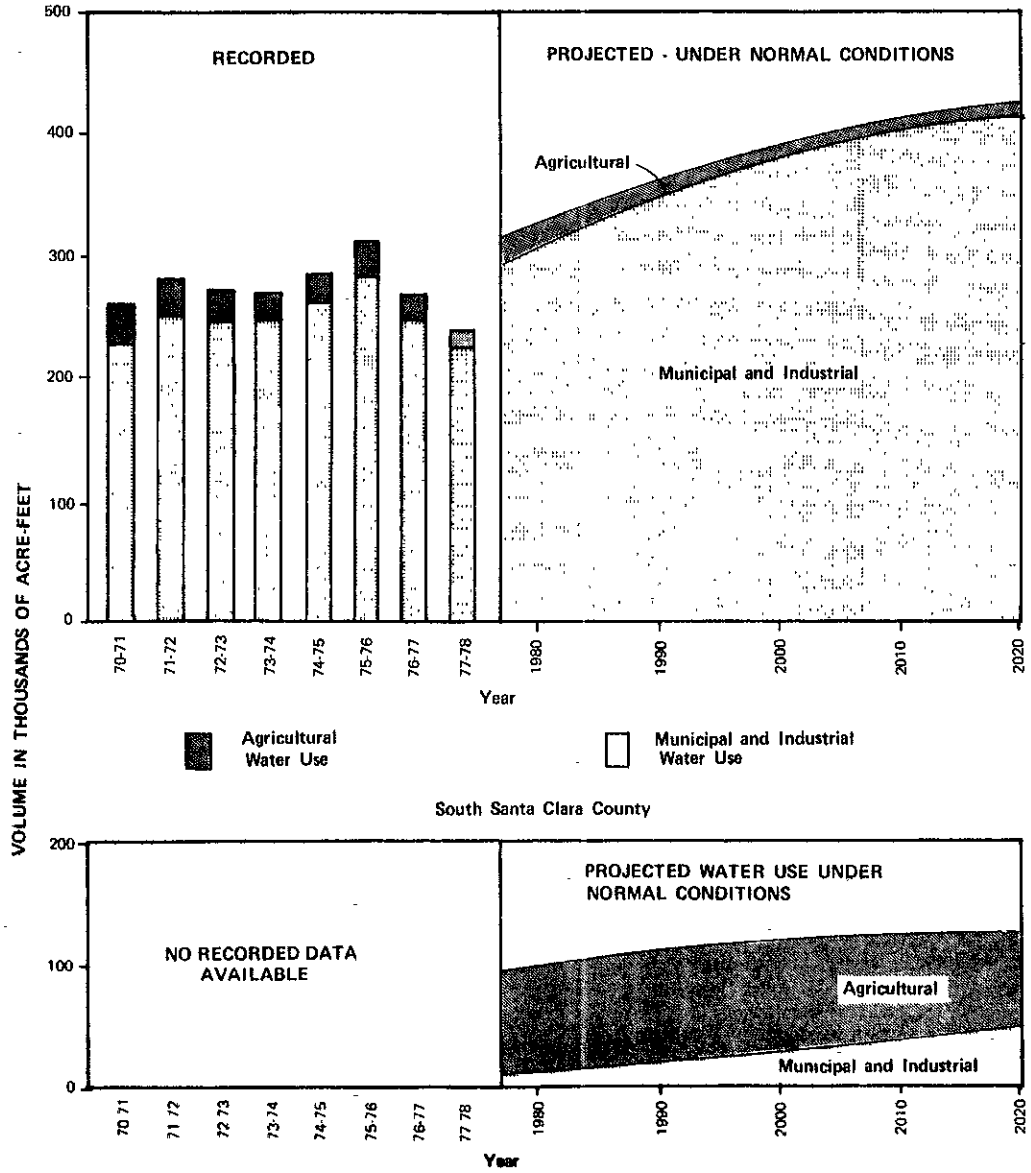
Water use in Santa Clara County is categorized as either agricultural or municipal and industrial. Recorded North County water use for the period 1970-71 through 1977-78 is shown to the right.

Projections of future water use in North Santa Clara County as shown to the right indicate a long-term average increase through 1995 when the rate of increase will begin to gradually decrease. Although agricultural requirements are gradually decreasing, the total water demand is expected to reach 420,000 acre-feet per year in 2020 due to increasing industrial and residential requirements.

Water use in South Santa Clara County, the area south of Metcalf Road, has been primarily agricultural and has been met by available local supplies, mainly from groundwater pumping. Since a formalized metering program has not yet been established in the South County, recorded water use data are not available.

In South Santa Clara County, it is also anticipated that municipal and industrial water requirements will continue to increase while agricultural requirements will decrease. Annual water use in South Santa Clara County is projected to increase to about 125,000 acre-feet by 2020.

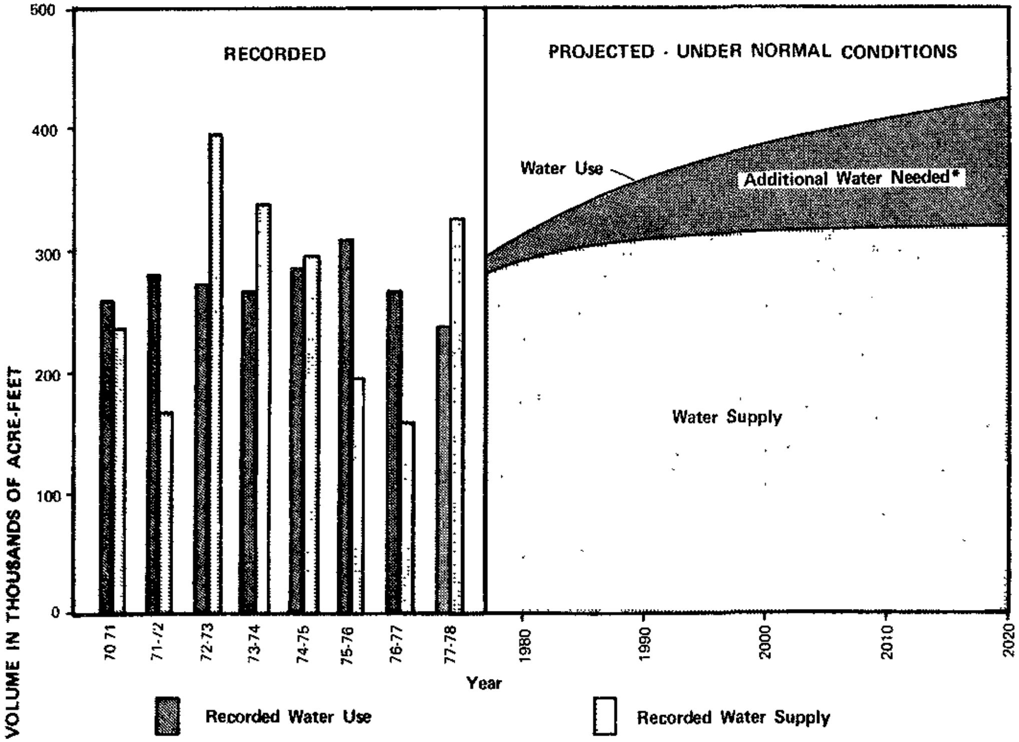
RECORDED AND PROJECTED WATER USE



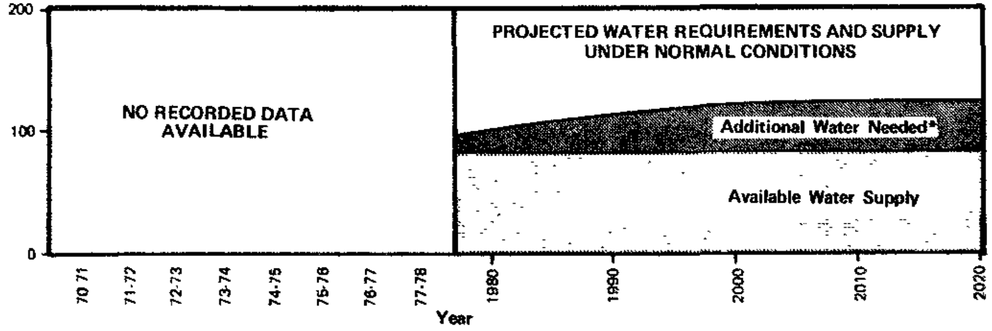
. . .and Water Supply

RECORDED WATER USE AND SUPPLY
AND
PROJECTED WATER REQUIREMENTS AND SUPPLY

North Santa Clara County



South Santa Clara County



*Additional water needed to be supplied from reclaimed wastewater projects and the San Felipe Project.

Present water supplies in North Santa Clara County consist of locally conserved water and water imported from the Hetch Hetchy and South Bay Aqueducts. The water supplies that have been available in North Santa Clara County since 1970-71 are shown to the left.

In 1977-78, the supply of water in Santa Clara County was greater than average as a result of above average rainfall. During this period, water reserves in the groundwater basins and reservoirs were partially replenished following overdrafting and drawdown during the previous two-year drought.

As shown in the graphs on the left, projected average water use will exceed normal supplies on a yearly basis beginning in 1979. As a result, the groundwater basins in the County will function in a water-deficit condition until additional supplemental water supplies are available. These supplemental water supplies will be from the San Felipe Project, expected to be available by the mid 1980s and from increased use of reclaimed water.

In-County Water Distribution System. . .

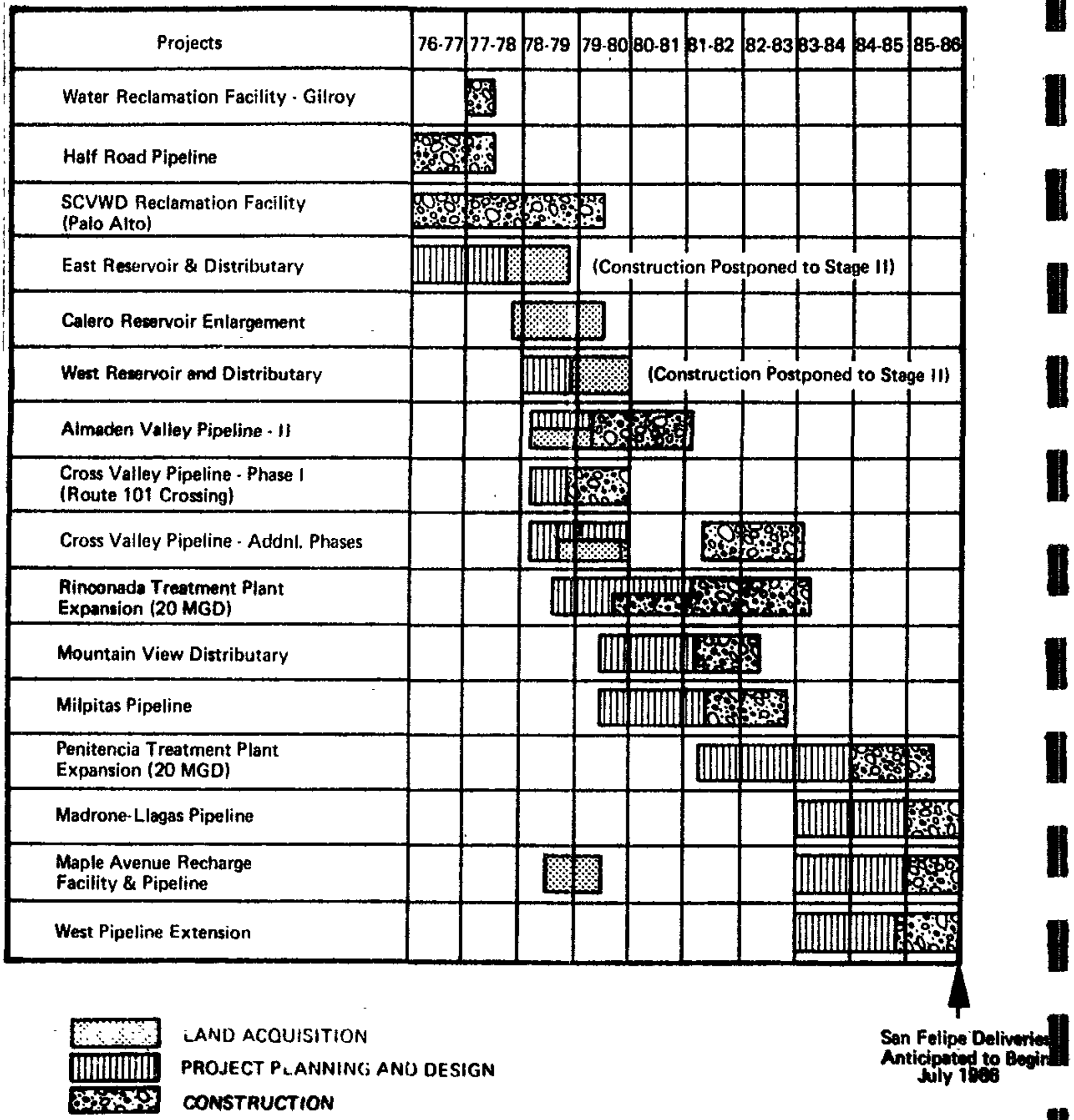
To adequately meet the projected water needs of the County, it is necessary to expand the In-County Distribution System by constructing several major new facilities. Since publication of its Master Plan, the District has updated its projected new facility construction program. Due to a reduction in the Treated Water Contractor's peaking requirements, construction of the East Reservoir, the West Reservoir and the Parallel West Pipeline has been postponed from Stage I to Stage II.

The table to the right shows the current schedule for land acquisition, project planning and design and construction of the proposed Stage I facilities through 1985-86.

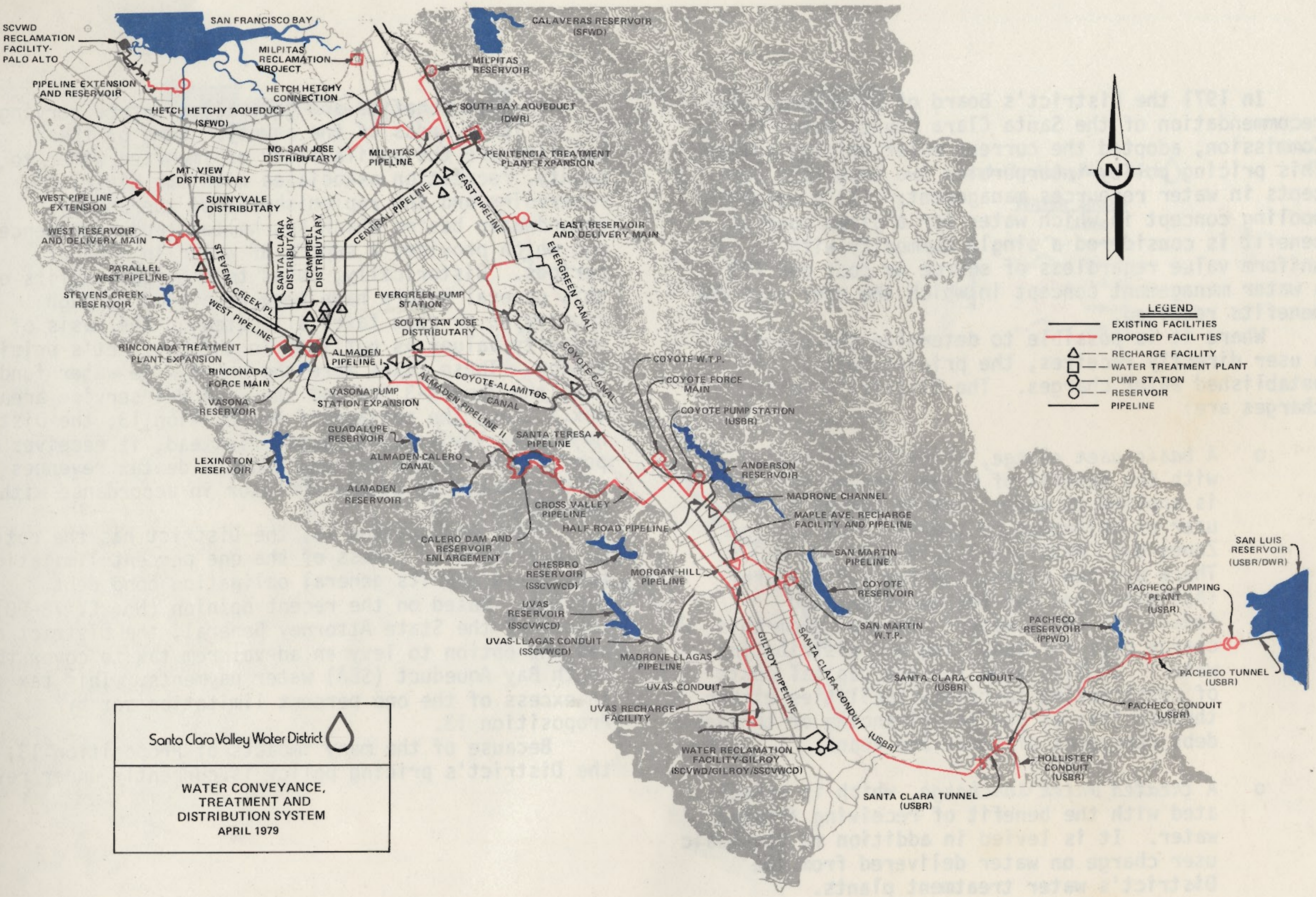
The schedule does not include the construction of an enlarged Calero Reservoir, possible corrective measures for Stevens Creek Dam, or potential modifications to the potable water treatment plants required by undefined future water quality requirements. Costs associated with these items are not included in the expenditure forecasts in this report.

The map on the following page shows the location of the major existing facilities of the In-County Distribution System, the Stage I facilities listed in the proposed construction schedule, and those facilities scheduled for construction in Stage II and Stage III as outlined in the Master Plan.

PROJECTED NEW FACILITY CONSTRUCTION PROGRAM (STAGE I)
FOR THE WATER UTILITY ENTERPRISE
1976-77 THROUGH 1985-86



. . .Improvement and Expansion



Santa Clara Valley Water District

WATER CONVEYANCE, TREATMENT AND DISTRIBUTION SYSTEM
APRIL 1979

Sources of Revenue. . .

In 1971 the District's Board of Directors, upon recommendation of the Santa Clara County Water Commission, adopted the current water pricing policy. This pricing policy incorporated two important concepts in water resources management: (1) a water pooling concept in which water for a given zone of benefit is considered a single commodity with a uniform value regardless of source or cost and (2) a water management concept in which the user pays for benefits received.

Where it is possible to determine the benefits a user directly receives, the pricing policy established water charges. The District's water charges are:

- A *basic user charge*, which is associated with the benefit of water consumption. It is applied to water that is pumped by the user or delivered by the District within Zones W-2, W-3.1, W-3.2, W-3.3, and W-3.5. There are two rates, one for agricultural (Ag) water and one for municipal and industrial (M&I) water. Revenue from this charge pays for supplying and distributing water. It also pays for the capital costs of constructing in-county facilities either through "pay as you go" financing or through debt repayment of bonds and loans.

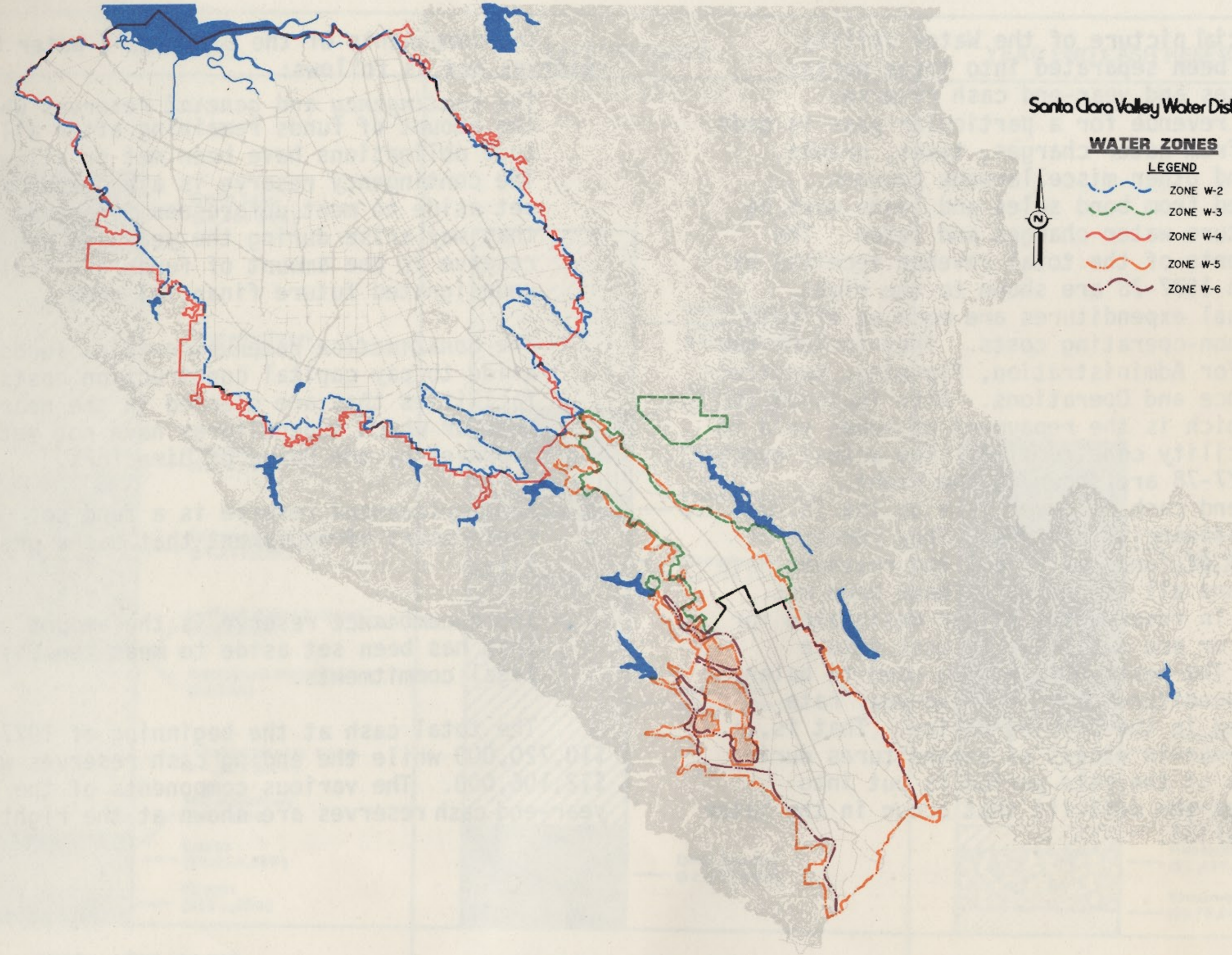
- A *treated water surcharge*, which is associated with the benefit of receiving treated water. It is levied in addition to the basic user charge on water delivered from the District's water treatment plants.

Several benefits are general in nature serving all or large areas of the county. Some of these benefits are the availability of imported water to the county, recreation associated with the District's reservoirs and the replenishment of the County's groundwater basins which has halted land subsidence and which provides a supply of water in drought periods. Historically, costs to provide benefits of this general nature have been recovered through countywide or zone taxes allocated on the basis of property values as outlined in the District's pricing policy. These taxes were the countywide water fund tax, the Zone W-3 tax and the Zone W-4 service area tax. Since the passage of Proposition 13, the District no longer levies such taxes. Instead, it receives a portion of the one percent countywide tax revenues as allocated by the County Assessor in accordance with Senate Bill 154.

Under Proposition 13, the District has the option to levy taxes in excess of the one percent limitation that would pay its general obligation bond debt service. Based on the recent opinion (No. CV 78-90) issued by the State Attorney General, the District also has the option to levy an ad valorem tax to cover the South Bay Aqueduct (SBA) water payments. This tax is in excess of the one percent limitation set by Proposition 13.

Because of the many impacts of Proposition 13, the District's pricing policy is currently under review.

. . .Related to Costs of Providing Benefits



The Financial Picture...

The financial picture of the Water Utility Enterprise has been separated into three parts: revenue, expenses and year-end cash reserves.

The total revenue for a particular year is made up of revenue from water charges, taxes, grants, bonds, loans and other miscellaneous sources. Revenue advanced from bond sales and loans must be repaid from future water charges and taxes. The various components of the total revenue received by the District in 1977-78 are shown to the right.

Total annual expenditures are made up of both operating and non-operating costs. They include the program costs for Administration, Planning, Construction, Maintenance and Operations. Also included is Debt Service which is the repayment of bonds sold to finance new facility construction. The actual expenditures for 1977-78 are shown to the right.

The year-end cash reserves make up the third element of the financial picture. They consist of the net balance of funds after all the revenues have been received and all expenditures have been met. The funds held in reserve are either designated for specific items or are available to meet future expenditures. The reserves are also used to balance revenue and expenditures for the five-year rate period mentioned in the pricing policy. That is, a portion of revenue in excess of expenditures during the first years of the rate period is put into reserves to meet the deficits that occur in the later years of the period.

The components of the District's Water Utility reserves are as follows:

The *contingency* and *general* reserves which are the amount of funds remaining after all expenditure obligations have been met or allowed for. The contingency reserve is a budgeted amount set aside to meet unforeseen financial needs that may arise during the year and the general reserve is the amount of funds available for undesignated future financial needs.

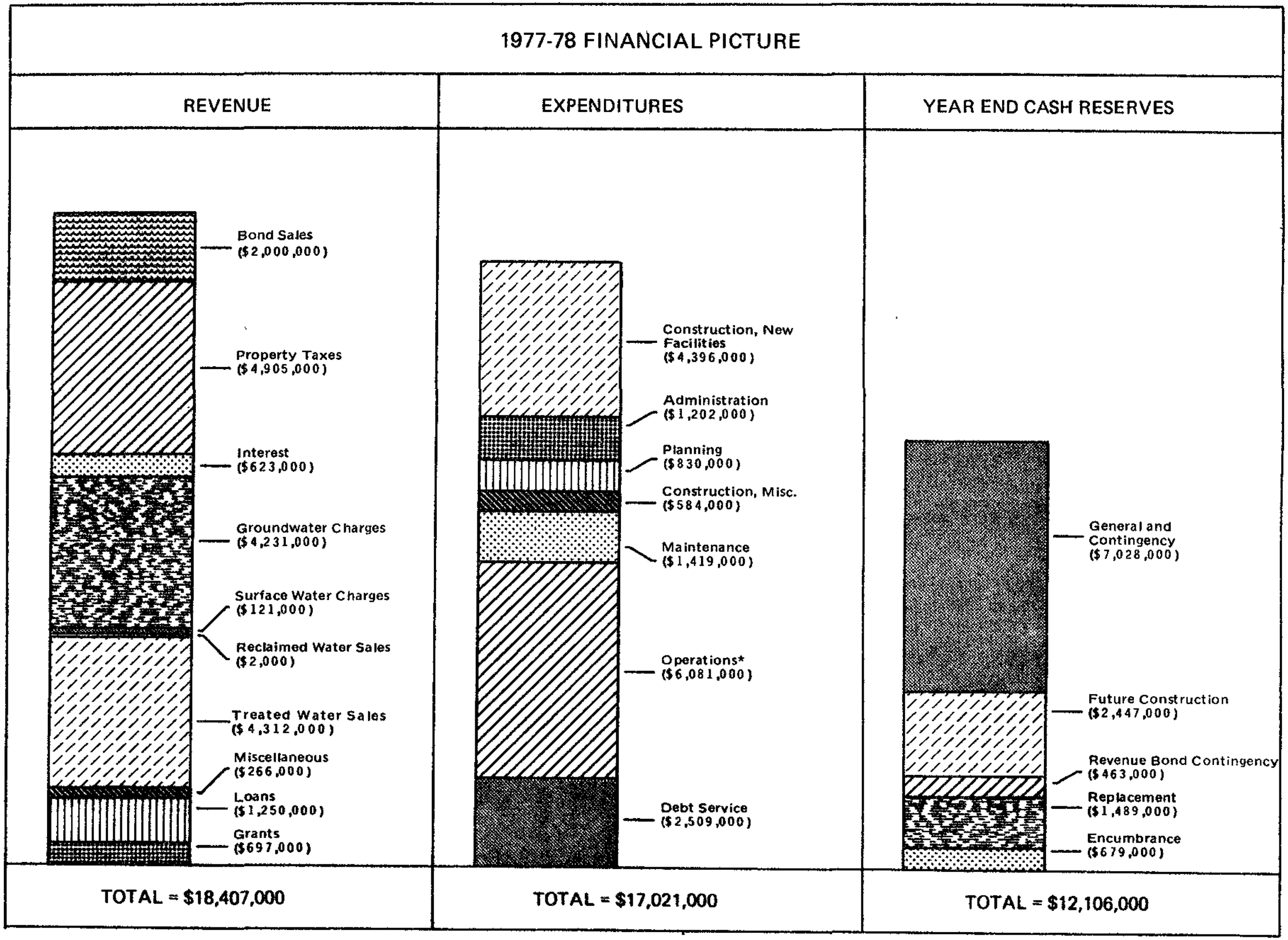
The *construction* reserve contains funds set aside to pay capital construction costs of facilities that are planned in the near future but for which expenditures have not yet been approved by the Board of Directors.

The *replacement* reserve is a fund set up for replacement of equipment that has a predictable life.

The *encumbrance* reserve is the amount of money that has been set aside to meet the District's legal commitments.

The total cash at the beginning of 1977-78 was $10,720,000 while the ending cash reserves were $12,106,000. The various components of the 1977-78 year-end cash reserves are shown at the right.

. . .of the Water Utility Enterprise



*Includes $2,085,000 capital cost component of SBA payments. In future years this item will be included under "Construction, Misc."

Financial Estimates...

Estimated revenue, expenditures and year-end cash reserves for the current fiscal year are shown in the graph on the opposite page.

The 1978-79 revenue from water charges and water sales is based on basic user charges of $39 per acre-foot for municipal and industrial water and $9.75 per acre-foot for agricultural water. The treated water surcharge is $41 per acre-foot. The revenue from water charges and sales is about the same as projected for a normal water year.

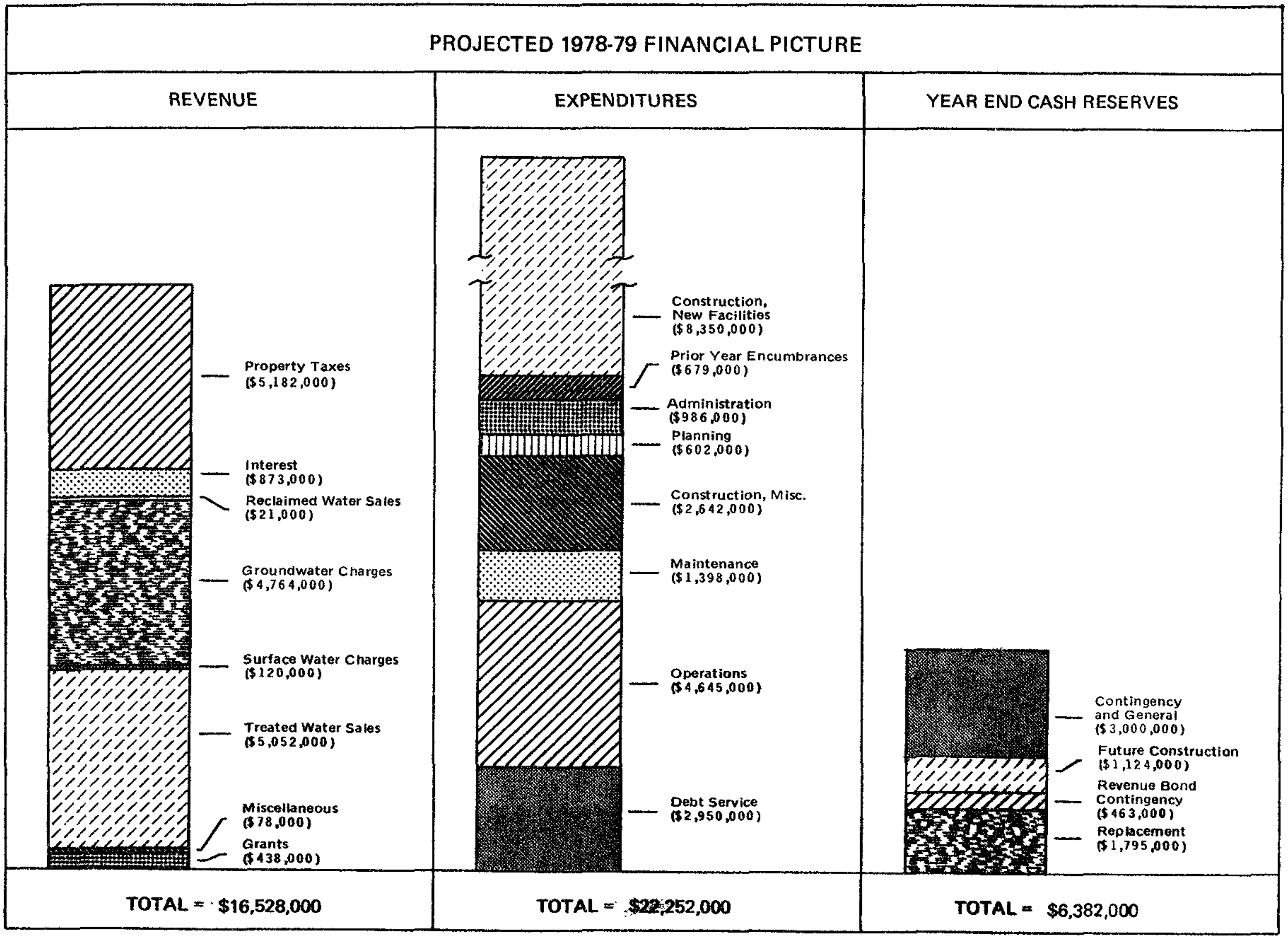
The 1978-79 revenue from property taxes is the first allocation under Proposition 13. The amount received within the one percent limitation is based on the allocation provisions of Senate Bill 154. The District has levied three property taxes to repay previously authorized general obligation bond debt service as provided under Proposition 13. The tax rates for these levies are $0.070 for the repayment of the 1963 general obligation bonds, $0.022 on land only for the repayment of the Water Conservation bonds and $0.002 on land only for the repayment of the Central Santa Clara Valley Water Conservation bonds. Property tax revenues for 1978-79 are about six percent less than had been anticipated without Proposition 13.

The expenditures estimated in 1978-79 are as shown on the opposite page. New facilities costs include design of the Almaden Valley Pipeline II ($490,000), the Cross Valley Pipeline ($290,000), and the Rinconada Water Treatment Plant expansion ($280,000). A contract for the construction and inspection of the Cross Valley Pipeline Phase I which parallels State Highway 101 ($3,560,000) is anticipated in the spring of 1979. Several land purchases are anticipated: East Reservoir ($560,000), West Reservoir ($480,000), Maple Avenue Recharge Facility ($370,000), Cross Valley Pipeline ($440,000), Almaden Valley Pipeline II ($150,000) and the enlargement of Calero Dam and Reservoir ($730,000). Construction of the last phases of the Santa Clara Valley Water District Reclamation Facility at Palo Alto ($1,000,000) also commenced in 1978-79.

In March 1979, the Board of Directors set the In-County Credit at $363,000 for fiscal year 1978-79. This credit, allocated to the various cities, is 60 percent of the amount the District had budgeted prior to passage of Proposition 13.

Based on estimated revenue and expenditures and assuming expenditure of the 1977-78 year-end encumbrances ($679,000), resulting cash reserves at the end of 1978-79 are shown to the right.

. . .for the Current Year
(1978-1979)


PROJECTED 1978-79 FINANCIAL PICTURE

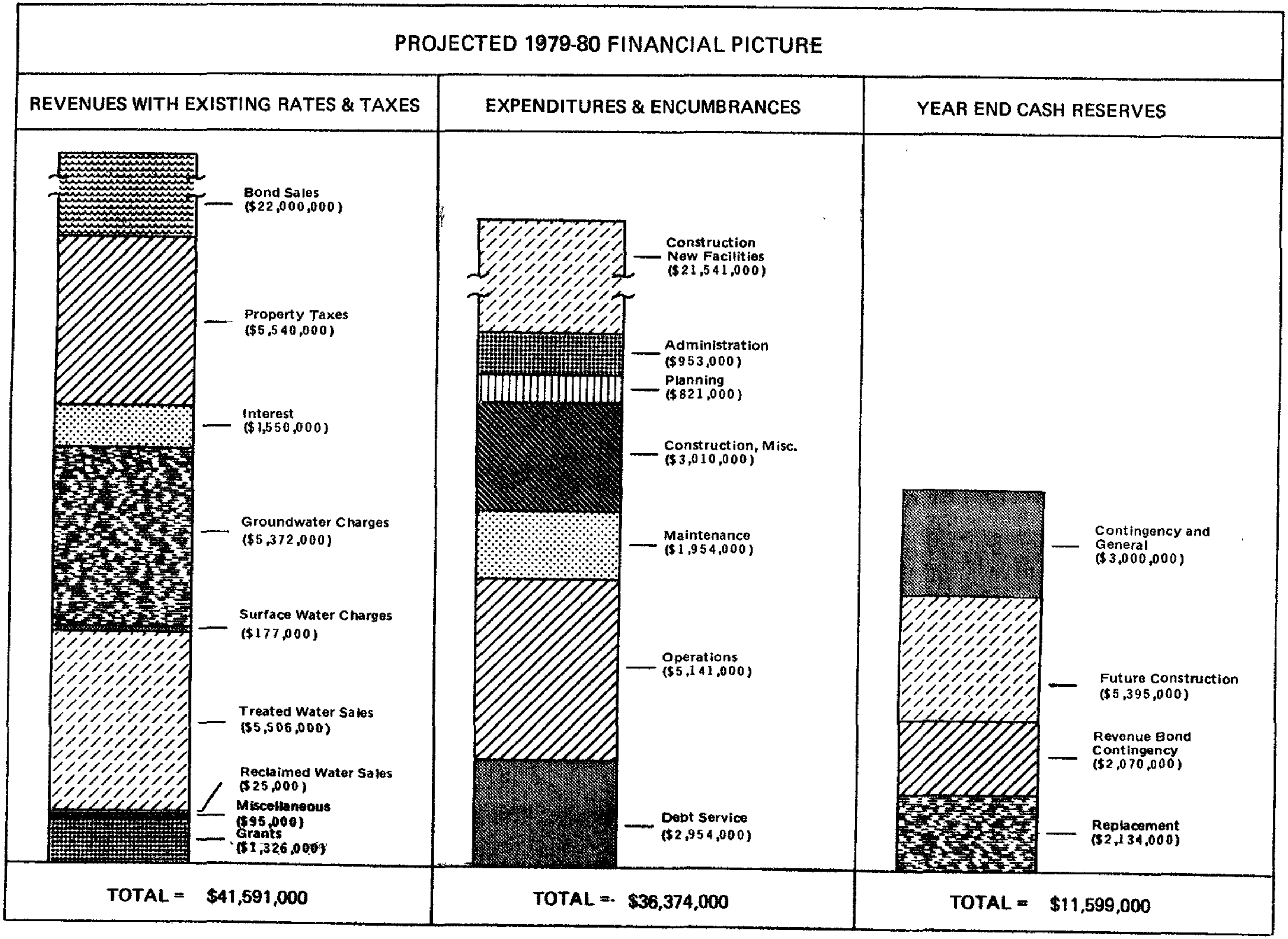
Financial Projections. . .

Projected revenue for 1979-80 is shown in the *graph on the opposite page. The projected revenue* is based on basic user charge rates of $44 per acre-foot for municipal and industrial water and $11 per acre-foot for agricultural water in Zones W-2, W-3.1, W-3.2, W-3.3, and W-3.5, with the Treated Water Surcharge remaining at $41 per acre-foot. Projected revenue includes $790,000 generated by a countywide ad valorem tax levied in excess of the Proposition 13 one percent limitation to pay part of the charges for the South Bay Aqueduct. The levy of this tax will increase the ad valorem tax rate by less than $0.02 per $100 of assessed valuation. A revenue bond sale of $22 million is scheduled for 1979-80. Proceeds from this bond sale will be used to finance the expansion of the In-County Water Distribution System.

Expenditures projected for 1979-80 include costs for operations and maintenance of existing facilities and for design and construction of new facilities. Major new facility costs are for the Almaden Valley Pipeline II ($18,987,000) which is anticipated to go to bid in late 1979. Additional new facility costs include design and land costs for further phases of the Cross Valley Pipeline ($1,720,000), design and construction costs for the Rinconada Water Treatment Plant ($757,000), and design costs for the Milpitas Pipeline ($64,000) and the Mountain View Distributary ($13,000). These projections of new facility costs are based on an overall 15 percent annual inflation rate.

The resulting year-end cash reserves are as shown to the right.

. . .for the Next Fiscal Year
(1979-1980)



Water Charges . . .

Basic user charges for the 1979-80 fiscal year in Zones W-2, W-3.1, W-3.2, W-3.3, and W-3.5 are summarized in the table below. No basic user charges will be levied in Zones W-5 and W-6.

BASIC USER WATER CHARGES[1]
FOR
FISCAL YEAR 1979-80

Basic User Water Charges:	
Agricultural Water (Ag.)	$11.00/Acre-Foot
Nonagricultural Water (M&I)	$44.00/Acre-Foot

A countywide ad valorem tax in the amount of $790,000 will be levied in 1979-80 to pay a portion of the South Bay Aqueduct costs.[2]

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[1] Adopted by the Board of Directors by Resolution No. 79-25 on April 17, 1979.

[2] Adopted by the Board of Directors by Resolution No. 79-24 on April 17, 1979.

OTHER WATER CHARGES[1]
FOR
FISCAL YEAR 1979-80

Other charges recommended for fiscal 1979-80 are as follows:

CHARGE	AG WATER	NONAG WATER
Watermaster	6.50/AF	6.50/AF
Stored Surface Water	11.00/AF	44.00/AF
Contract Treated Water Surcharge	41.00/AF	41.00/AF
Non-Contract Treated Water Surcharge	16.00/AF	16.00/AF
Gilroy Reclaimed Water	10.00/AF	40.00/AF
Capital Cost - Half Road/ Coyote-Madrone System	2.75/AF	2.75/AF
Power Cost - Half Road/ Coyote-Madrone System	10.00/AF	10.00/AF
Power Cost - Evergreen Distribution System	19.00/AF	19.00/AF
Power Cost - SCVWD Reclamation Plant at Palo Alto	2.00/AF	2.00/AF
Minimum Charge - Surface Water	33.00/YR	33.00/YR

Based on the recommended charges, the District's specific water rates will be as follows:

	RATE	
TYPE OF WATER	AG WATER	NONAG WATER
Groundwater	11.00/AF	44.00/AF
Surface Water		
Evergreen Deliveries	36.50/AF	69.50/AF
Half Road Deliveries	19.25/AF	19.25/AF
Other Areas	17.50/AF	50.50/AF
Stored Water	11.00/AF	44.00/AF
Minimum Charge	33.00/YR	33.00/YR
Treated Water		
Contract	-	85.00/AF
Non-Contract	-	60.00/AF
Reclaimed Water		
Gilroy	10.00/AF	40.00/AF
Palo Alto*	19.50/AF	52.50/AF

*For the City of Palo Alto, the charge for the first million gallons delivered per day is $11.00/AF for Ag water and $44.00/AF for Nonag water.

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[1] Adopted by the Board of Directors by Resolution No. 79-28 on April 17, 1979.